

## **REMARKS / ARGUMENTS**

Upon entry of this Submission, claim 7 will be canceled without prejudice or disclaimer of the subject matter recited therein; claims 1, 5, 6, 10, 11, 13, 14, 16, 20-24 will be amended; and claims 25-29 will be added. Therefore, claims 1-6 and 8-29 will be pending. Of the pending claims, claims 1-6 are under consideration, and claims 8-24 stand withdrawn from consideration as being directed to non-elected inventions.

Applicants note that the claims have been amended to be more in accordance with idiomatic English and standard U.S. practice.

Moreover claims 1 and 23, and the specification have been amended to change 29 kDa to 25.7 kDa in a number of occurrences to conform the molecular mass to that disclosed at page 30, first full paragraph and Table 1 on page 31.

Method claims 25-29 have been added directed to methods for activating blood coagulation factor IX in a mammal. Support for these claims appears throughout Applicants' originally filed application, such as beginning at page 18, line 9.

Applicants respectfully submit that these claims are examinable with the elected claims, and there should be no undue burden to examine these claims in the same application.

Applicants further note that the Sequence Listing has been corrected to address errors which occurred in SEQ ID NOS: 3 and 4 at position 80. The errors have been corrected by replacing threonine (T) with tyrosine (Y) at position 80 of SEQ ID NO: 3 and SEQ ID NO: 4.

In accordance with 37 C.F.R. 1.821(f), the undersigned hereby states that the information recorded in the computer readable form is identical to the written sequence listing.

Applicants hereby state that the submission, filed in accordance with 37 C.F.R. 1.821(g), herein does not include new matter.

Accordingly, the present amendment should not constitute new matter.

Reconsideration and allowance are respectfully requested.

### **Discussion of Telephone Interview with Examiner**

Applicants express appreciation for the courtesies extended by the Examiner during a June 28, 2005 telephone conversation wherein the objections relating to the sequence identifiers and error in SEQ ID NOS: 3 and 4 at position 80 were discussed.

The Examiner indicated that amendment of Table at page 31 to clarify that the fragments are fragments of SEQ ID NO: 4 would be appropriate. The Examiner also suggested that each of the fragments in Fig. 10 be identified with a sequence identifier. Still further, the Examiner indicated he will consider the corrections to the Sequence Listing when submitted. The Examiner also noted an additional small peptide sequence to be included in the Sequence Listing.

## **Response to Maintaining of Restriction Requirement**

The Office Action acknowledges Applicants' election with traverse of Group I, claims 1-7, and maintains the Restriction Requirement withdrawing claims 8-24 from further consideration pursuant to 37 C.F.R. 1.142(b), as being drawn to a non-elected inventions.

In response, Applicants respectfully submit that the Restriction Requirement should be withdrawn for at least the reasons previously set forth by Applicants in the Election with Traverse. In any event, upon allowance of the elected claims, the claims of groups II – VII should be rejoined. Therefore, the non-elected claims are being permitted to remain pending subject to rejoinder upon allowance of the claims under prosecution.

Moreover, as noted above, newly-added claims 25-29 should be examined with the elected invention.

## **Information Disclosure Statement**

Applicants express appreciation for the consideration of the Information Disclosure Statement, filed on March 12, 2004, by including an initialed copy of the Form PTO-1449 submitted therewith. However, Applicants note that documents 2 (KAIBARA et al.) and 11 (NAKAMURA et al.) have been crossed through as not being considered, because the documents are in Japanese.

In response, Applicants note that KAIBARA et al. and NAKAMURA et al. are cited and discussed in the specification. In particular, KAIBARA et al. is cited and discussed beginning at page 2, second paragraph of the specification and NAKAMURA is cited and discussed at page 34, second paragraph of the specification. Accordingly, these

documents should be considered at least for the description of these documents in the specification.

Applicants also note that both documents have been considered and initialed on the Form PTO-1449 in the parent application.

Applicants are therefore submitting another copy of the Form PTO-1449 listing these documents. The Examiner is respectfully requested to indicate consideration of these documents by initialing the form, and forwarding a copy of the initialed form with the next communication from the Patent and Trademark Office.

Applicants are submitting herewith a Supplemental Information Disclosure Statement. The Examiner is respectfully requested to consider this Supplemental Information Disclosure Statement, initial the Form PTO-1449 submitted therewith, and include a copy of the initialed form with the next communication from the Patent and Trademark Office.

### **Response to Objection of the Specification**

The Examiner has objected to the disclosure for several informalities, which have been addressed by the amendments herein.

(A) The table on page 31 has been identified as Table 1 and the table on page 33 has been amended as Table 2.

(B) The fragments disclosed in Table 1 on page 31 have been characterized as being fragments of SEQ ID NO:4 at the top of Table 1. Applicants submit that this should be sufficient identification. However, if the Examiner deems that other characterization would be appropriate, the Examiner is requested to contact the undersigned.

Applicants have also made additional amendments, as discussed above, to include sequence identifiers for -Ala-Ala-Pro-Val- which is a portion of Suc(OMe)-Ala-Ala-Pro-Val-MCA disclosed on pages 6, 22, 37, 38, 39 and 40, and claim 22.

Also, as discussed above, in Figure 4, the sequences cited in a) have been labeled as SEQ ID NO: 1 and SEQ ID NO: 2, and the listed sequence form of human leukocyte in b) has been labeled as SEQ ID NO: 3.

(C) The two fragments of the amino acid sequence shown in figure 10 have been identified as SEQ ID NO: 5 and SEQ ID NO: 6.

(D) The spelling of Glycosylation in Figure 14 has been corrected.

(E) The text "SEQ ID NO. 4" on pages 4, 9 and 30 as well as in the abstract on page 48 has been amended to SEQ ID NO: 4.

Accordingly, the objection should be withdrawn.

### **Response to Claim Objections**

Claim 1 is objected as containing informalities.

In response, Applicants note that claim 1 has been amended to recite the sequence identifier as SEQ ID NO: 4.

Regarding the assertion that the members of the Markush group of claim 1 should be separated with commas and not semicolons, Applicants respectfully submit that this objection is not appropriate. Claim 1 does not recite a Markush group, but recites various properties of the recited protein. Accordingly, semicolons are appropriate and, in fact, are preferred.

Accordingly, this ground of objection should be withdrawn.

**Response to the Claim Rejection under 35 U.S.C. § 112, first paragraph**

Claims 1-7 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

The rejection asserts that SEQ ID NO: 4 does not occur naturally and that Applicants do not provide information how to make or use SEQ ID NO: 4. The rejection refers to a number of documents to support this assertion.

As discussed with the Examiner during the above-noted telephone interview, an error occurred in the Supplemental Sequence Listing provided with the Preliminary Amendment, filed July 2, 2004. At position 80 of SEQ ID NO: 4, the amino acid should have been listed as tyrosine (Tyr), but was listed in the Supplemental Sequence Listing as threonine (Thr). The same error was also included in SEQ ID NO: 3.

As discussed above, Applicants are submitting a corrected Second Supplemental Sequence Listing correcting SEQ ID NOS: 3 and 4 to include to tyrosine (Tyr) at position 80.

Applicants respectfully submit that the specification enables the corrected Sequence Listing, and requests withdrawal of the enablement rejection.

While the Office Action does not include an art based rejection, Applicants note that the Examiner is interpreting Applicants' claims to be an open claim, and appears to be stating that the cited documents are close to Applicants' claimed protein. However, Applicants submit that the documents do not appear to teach or suggest an isolated blood coagulation factor IX-activating protein derived from a mammal, which has an amino acid sequence of SEQ ID NO: 4 and has the following properties:

- (1) the protein acts on blood coagulation factor IX to activate said factor;

(2) the activity of the protein is inhibited in the presence of an  $\alpha$ 1-protease inhibitor or soybean trypsin inhibitor;

(3) the protein is present in erythrocyte membrane;

(4) the protein has a molecular weight of approximately 25.7 kDa as measured by SDS-PAGE; and

(5) the protein cuts the amino acid sequence of the blood coagulation factor IX between 140th threonine and 141th serine, between 181th valine and 182th valine, and between 182th valine and 183th glycine.

Accordingly, an early allowance of the application is respectfully requested.

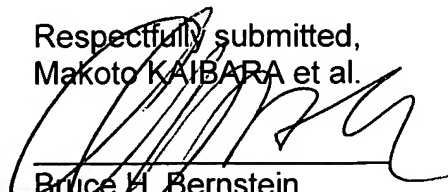
### **CONCLUSION**

For the reasons advanced above, Applicants respectfully request withdrawal of the restriction requirement, objections and rejection of record, and allowance of each of the pending claims.

Allowance of the application with an early mailing date of the Notice of Allowance and Allowability is therefore respectfully requested.

Should the Examiner have any further comments or questions, or wishes to discuss this matter, please call the undersigned at the telephone number indicated below.

Respectfully submitted,  
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### **AMENDMENTS TO THE DRAWINGS**

The attached three Replacement Sheets of drawings include changes to Figures 4, 10 and 14. The Replacement Sheets replace the original sheets including Figures 4, 10 and 14. Figure 4 has been amended to include sequence identifier SEQ ID NO:1 and SEQ ID NO:2 for the two amino acid sequences shown under a); and the sequence identifier SEQ ID NO:3 for the amino acid sequence presented under b). Figure 10 has been changed to separately label the two cited sequence fragments of blood coagulation factor IX by adding the sequence identifiers SEQ ID NO:5 and SEQ ID NO:6. Figure 14 has been changed to correct the spelling of the term "N-glycosylation".

Attachment: Three Replacement Sheets